

### **REMARKS**

Claims 1-34 are currently pending in the subject application and are presently under consideration. Claims 1, 12, 16, 20, 21, 28, and 31 have been amended and claims 2, 10, 13, 17-19, 22-24, 27, 29, 30 and 32-34 have been cancelled herein. The amendments should be entered because they place the subject claims in condition for allowance. No new material has been added, so no further search is required. A listing of the claims can be found at pp. 3-11 of the Reply. Additionally, as indicated at p. 2 above, replacement a drawing sheet to replace Fig. 1 (1/6) has been submitted herewith.

Favorable reconsideration of the subject patent application is respectfully requested in view of the comments and amendments herein.

#### **I. Objection to Drawings**

Figure 1 has been amended, as shown in the replacement drawing sheet submitted herewith, to correct minor informalities cited by the Examiner. Therefore, it is respectfully requested that this objection be withdrawn.

#### **II. Rejection of Claims 22-24 and 27-30 Under 35 U.S.C §112, first paragraph**

Claims 22-24 and 27-30 stand rejected under 35 U.S.C. §112, first paragraph. Independent claim 28 has been amended, as indicated above, to remove informalities cited by the Examiner. Therefore, this rejection should be withdrawn. Additionally, claims 22-24, 27, 29 and 30 have been cancelled as indicated above, so this rejection is moot.

#### **III. Rejection of Claims 1, 3, 5-7, 9, 11, 12, 14-16, 18 and 31 Under 35 U.S.C §103(a)**

Claims 1, 3, 5-7, 9, 11, 12, 14-16, 18 and 31 stand rejected under 35 U.S.C. §103(a) over Gamal, *et al.* (U.S. 6,671,338) in view of Claussen, *et al.* (U.S. Pub. No. 2004/0038653). This rejection should be withdrawn for at least the following reasons. Gamal, *et al.* and Claussen, *et al.*, alone or in combination, fail to teach or suggest each and every feature as recited in the subject claims. Additionally, claim 18 has been cancelled, so this rejection is moot.

The claimed subject matter relates to techniques for performing data detection for a hierarchical coded data transmission in a wireless communication system. These techniques are designed to minimize buffering requirements for such data detection. Accordingly, a base

stream is detected based upon received symbols and the enhancement stream is detected based upon log-likelihood ratios (LLRs) for the base stream.

The Examiner has indicated that the following features, as recited in claims 33 and 34, are allowable, “*means for detecting errors in the data symbol estimates based on the remodulated symbols; means for setting LLRs for code bits of the data symbol estimates detected to be in error to erasures for decoding; means for deriving correction factors for the data symbol estimates detected to be in error; and means for updating the LLRs for code bits of the data symbol estimates detected to be in error with the correction factors.*” See Final O.A. at 15. Accordingly, claims 33 and 34 have been cancelled as indicated above, and these features have been incorporated into independent claims 1, 12, 16, and 31. Therefore, Gamal, *et al.* and Claussen, *et al.*, alone or in combination, fail to teach or suggest each and every feature as recited in the independent claims.

For example, independent claim 1, as amended, recites in part, “adjusting the enhancement LLRs based on the remodulated symbols and the data symbol estimates, comprising: *detecting errors in the data symbol estimates based on the remodulated symbols; setting LLRs for code bits of the data symbol estimates detected to be in error to erasures for decoding; deriving correction factors for the data symbol estimates detected to be in error; and updating the LLRs for code bits of the data symbol estimates detected to be in error.*” The Examiner has indicated that these features are allowable. See Final O.A. at p. 15. Therefore, independent claim 1 recites allowable subject matter that is not taught or suggested by the cited art, taken either alone or in combination. Additionally, associated dependent claims 3, 5-7, 9, 11, 12, 14 and 15 are also allowable at least since they depend from an allowable claim. Therefore, for at least the aforementioned reasons, it is respectfully requested that this rejection be withdrawn and independent claim 1 (as well as associated dependent claims 3, 5-7, 9, 11, 12, 14 and 15) allowed.

Similarly, amended independent claim 12 also recites allowable subject matter. Specifically, independent claim 12 recites in part, “a LLR adjustment unit operative to adjust the LLRs for code bits of the enhancement stream by: *detecting errors in the data symbol estimates based on the remodulated symbols; setting LLRs for code bits of the data symbol estimates detected to be in error to erasures for decoding; deriving correction factors for the data symbol estimates detected to be in error; and updating the LLRs for code bits of the data symbol*

*estimates detected to be in error with the correction factors.*” The Examiner has indicated that these features are allowable. See Final O.A. at 15. Accordingly, Gamal, *et al.* and Claussen, *et al.*, alone or in combination, fail to teach or suggest each and every feature as recited in independent claim 12. Therefore, independent claim 12 recites allowable subject matter. Additionally, associated dependent claims 13 and 14 are allowable since they depend from an allowable base claim. For at least these reasons, it is respectfully requested that this rejection be withdrawn with respect to independent claim 12, as well as associated dependent claims 13 and 14, and the subject claims allowed.

Additionally, independent claim 16, as amended, recites in part, “means for adjusting the LLRs for the code bits of the enhancement stream based on the remodulated symbols and the data symbol estimates, comprising: *means for detecting errors in the data symbol estimates based on the remodulated symbols; means for setting LLRs for code bits of the data symbol estimates detected to be in error to erasures for decoding; means for deriving correction factors for the data symbol estimates directed to be in error; and means for updating the LLRs for code bits of the data symbol estimates detected to be in error with the correction factors.*” The Examiner has indicated that these features are allowable. See Final O.A. at p. 15. As such, independent claim 16 recites allowable subject matter that Gamal, *et al.* and Claussen, *et al.*, taken alone or in combination, fail to teach or suggest. Moreover, at least because independent claim 16 recites the aforementioned allowable subject matter, this rejection should be withdrawn and claim 16 allowed.

Likewise, the allowable elements of claims 33 and 34 have also been incorporated into independent claim 31. Accordingly, independent claim 31, as amended, recites in part, “*means for detecting errors in the data symbol estimates based on the remodulated symbols; means for setting LLRs for code bits of the data symbol estimates detected to be in error to erasures for decoding; means for deriving correction factors for the data symbol estimates detected to be in error; and means for updating the LLRs for code bits of the data symbol estimates detected to be in error with the correction factors.*” The Examiner has indicated that these elements are allowable. See Final O.A. at p. 15. Therefore, independent claim 31 recites allowable subject matter. At least for the aforementioned reasons, this rejection should be withdrawn, and independent claim 31 should be allowed.

For at least the aforementioned reasons, the subject claims clearly recite allowable subject matter. As such, it is respectfully requested that this rejection be withdrawn and the subject claims allowed.

**IV. Rejection of Claims 20, 21 and 25 Under 35 U.S.C. §103(a)**

Claims 20, 21 and 25 stand rejected under 35 U.S.C. §103(a) over Applicants' background in view of Bjerke, *et al.* (U.S. Pub. No. 2003/0103584). This rejection should be withdrawn for at least the following reasons. Bjerke, *et al.* does not teach or suggest each and every element as recited in the subject claims.

Independent claim 20 has been amended to include elements of claims 22-24. These claims were only rejected under 35 U.S.C. §112. Thus, the Examiner admits that the cited art fails to read on these feature. Accordingly, Bjerke, *et al.* fails to teach or suggest each and every feature as recited in amended independent claim 20. Specifically, independent claim 20, as amended, recites in part, ***“adjusting the LLRs for the code bits of the second data stream based on the remodulated symbols and the data symbol estimates for the first data stream; performing an error detection function for the data symbol estimates based on the remodulated symbols; deriving correction factors for the data symbol estimates detected to be in error; and updating LLRs for code bits of the data symbol estimates detected to be in error with the correction factors.”*** Additionally, these features are similar to the features of claims 33 and 34 that the Examiner has indicated are allowable. See Final O.A. at p. 15. Therefore, independent claim 20 clearly recites allowable subject matter. Additionally, associated dependent claims 21 and 25 are also allowable at least by virtue of dependence from an allowable base claim. Therefore, it is respectfully requested that this rejection be withdrawn and the subject claims allowed.

**V. Rejection of Claims 2, 13, 17 and 32 Under 35 U.S.C. §103(a)**

Claims 2, 13, 17 and 32 stand rejected under 35 U.S.C. §103(a) over Gamal, *et al.* Claussen, *et al.* and further in view of Lozano (U.S. Pat. Pub. 2003/0076797). This rejection should be withdrawn for at least the following reasons. Claims 2, 13, 17 and 32 have been cancelled as indicated above, so this rejection is moot.

**VI. Rejection of Claims 4 and 19 Under 35 U.S.C. §103(a)**

Claims 4 and 19 stand rejected under 35 U.S.C. §103(a) over Gamal, *et al.* Claussen, *et al.* and further in view of Maru (U.S. 6,516,444). This rejection should be withdrawn for at least the following reasons. Gamal, *et al.*, Claussen, *et al.* and Maru, either alone or in combination, do not teach or suggest each and every element of the subject claims. Additionally, claim 19 has been cancelled as indicated above, so this rejection is moot.

Claim 4 depends from independent claim 1. As indicated above, amended independent claim 1 clearly recites allowable subject matter. As such, Gamal, *et al.*, Claussen, *et al.* and Maru, alone or in combination, fail to teach or suggest each and every feature as recited in independent claim 1. At least by virtue of dependence, the cited art, alone or in combination, fails to teach or suggest each and every feature as recited in claim 4. Therefore, it is respectfully requested that this rejection be withdrawn and claim 4 allowed.

**VII. Rejection of Claim 26 Under 35 U.S.C. §103(a)**

Claim 26 stands rejected under 35 U.S.C. §103(a) over Applicants' background and Bjerke, *et al.* further in view of Maru. This rejection should be withdrawn for at least the following reasons. Bjerke, *et al.* and Maru, either alone or in combination, do not teach or suggest each and every element of the subject claim.

Claim 26 depends from independent claim 20. As indicated above, amended independent claim 20 clearly recites allowable subject matter. Accordingly, Bjerke, *et al.* and Maru, alone or in combination, fail to teach or suggest each and every feature as recited in independent claim 20. At least by virtue of dependence, the cited art, alone or in combination fails to teach or suggest each and every feature as recited in claim 26. Therefore, it is respectfully requested that this rejection be withdrawn and claim 26 allowed.

**VIII. Rejection of Claim 8 Under 35 U.S.C. §103(a)**

Claim 8 stands rejected under 35 U.S.C. §103(a) over Gamal, *et al.* Claussen, *et al.* and further in view of Bjerke, *et al.* This rejection should be withdrawn for at least the following reasons. Gamal, *et al.*, Claussen, *et al.* and Bjerke, *et al.*, either alone or in combination, do not teach or suggest each and every element of the subject claim.

Claim 8 depends from independent claim 1. As indicated above, independent claim 1, as amended, clearly recites allowable subject matter. Therefore, Gamal, *et al.*, Claussen, *et al.* and Bjerke, *et al.*, alone or in combination, fail to teach or suggest each and every feature as recited in independent claim 1. At least by virtue of dependence, the cited art, alone or in combination, fails to teach or suggest each and every feature as recited in claim 8. Accordingly, it is respectfully requested that this rejection be withdrawn and claim 8 allowed.

**VIII. Rejection of Claim 10 Under 35 U.S.C. §103(a)**

Claim 10 stands rejected under 35 U.S.C. §103(a) over Gamal, *et al.* Claussen, *et al.* and further in view of Applicants' background. This rejection should be withdrawn for at least the following reasons. Claim 10 has been cancelled, so this rejection is moot.

CONCLUSION

The subject application is believed to be in condition for allowance in view of the above comments and amendments. A prompt action to such end is earnestly solicited.

Please charge any fees or overpayments that may be due with this response to Deposit Account No. 17-0026.

Should the Examiner believe a telephone interview would be helpful to expedite favorable prosecution, the Examiner is invited to contact applicants' undersigned representative at the telephone number below.

Respectfully submitted,

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